RURAL HOSPITAL-BASED RESIDENCY PROGRAMS: A PRELIMINARY EVALUATION OF THE RURAL HEALTH MEDICAL EDUCATION DEMONSTRATION PROJECT

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RURAL HOSPITAL-BASED RESIDENCY PROGRAMS

A PRELIMINARY EVALUATION OF THE RURAL HEALTH MEDICAL EDUCATION DEMONSTRATION PROJECT

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Introduction

The Rural Health Medical Education Demonstration Project (RHMEDP) was developed to allow hospitals with residency programs to place residents in rural areas for clinical experience. The program was authorized by the Omnibus Budget Reconciliation Act of 1987 and was modified by the Omnibus Reconciliation Act of 1989. The purpose of the demonstration is to: "develop a cost-effective approach to assist physicians to develop clinical experience in rural areas using payment for graduate medical education under the Social Security Act" (Bureau of Health Professions, 1993). The program is administered by the Division of Medicine in the Bureau of Health Professions under the Health Resources and Services Administration (HRSA), but because of its financing implications there is a need to coordinate decisions and activities with the Health Care Financing Administration (HCFA).

This paper describes the early attempts to implement the program and the eventual success of the Division of Medicine in selecting programs in which to place and support residents. Its purpose is to describe how programs that are intended to support rural training for physicians must face significant barriers to implementation and to discuss how those barriers may be overcome. The slow implementation of the Rural Health Medical Education Demonstration Project was due to several conditions caused by inflexible reimbursement policies, the constrained resources faced by rural hospitals and some primary care programs, and the need for support and brokerage services to bring physician training programs and communities closer together.

Background

The original legislation called for the approval of four programs as part of the demonstration; OBRA 1989 expanded that authority to 10 programs. The initial attempts by the Division to implement the program met with problems and no residents were actually in place until after three rounds of solicitations for applicants. The first solicitation for proposals to participate appeared in the *Federal Register*, December 6, 1988 and yielded three applicants. Two were selected by the Division of Medicine: Pitt County Memorial Hospital,

Greenville, North Carolina affiliated with Martin General Hospital in Williamston, NC; and Trinity Lutheran Hospital of Kansas City, Missouri. The Pitt County project was supported by the East Carolina University School of Medicine's Department of Family Medicine. This program experienced difficulties in finalizing the cooperative structure and implementation was delayed until August, 1990. The Trinity program withdrew without implementing its program. The Pitt County program did place residents for a period but a low match rate caused the project to eventually withdraw.

A second solicitation was published in the *Federal Register* on April 9 and three additional applications were received and two were selected: Providence Hospital in Southfield, Michigan affiliated with Mercy Hospital/Grayling in Grayling, Michigan (this program also was delayed in implementing and started in August, 1990); St. Joseph's Hospital and Medical Center of Phoenix, Arizona (this applicant did not respond to queries from the agencies involved and was removed from the program in October 1991). A third solicitation was published in the *Federal Register* on April 16, 1991 and five proposals were submitted; three were accepted and all three were able to implement successfully: Methodist Hospital of Indiana in Indianapolis, Indiana affiliated with Culver Union Hospital of Crawfordsville, Indiana which began implementation in September, 1991; the University Hospitals and Clinics of Oregon Health Sciences University in Portland Oregon affiliated with Wallowa Memorial Hospital in Enterprise, Oregon—this program was implemented in September, 1991; and the Family Practice Center of the University of North Dakota in Grand Forks, North Dakota affiliated with Pembina County Memorial Hospital and Cavalier Clinic, Cavalier, North Dakota, for which program implementation began in September 1991.

A fourth solicitation was issued in July 1992 and four project applicants were approved: the University Hospital of Arkansas, University of Arkansas for Medical Sciences in Little Rock, Arkansas affiliated with five rural sites; the University of Cincinnati Hospital, Cincinnati, Ohio, affiliated with Brown County Hospital, Georgetown, Ohio; the University of Washington Medical Center affiliated with Barrett Memorial Hospital in Dillon and the Livingston Memorial Hospital in Livingston, Montana; McKennan Hospital and the Sioux Valley Hospital, and the Sioux Falls Family Practice Residency of Sioux Falls, South Dakota affiliated with six sites in South Dakota and the U.S. Public Health Service (PHS) Indian National Health Service (INHS) Hospital in Rosebud, South Dakota. These four new projects were just beginning implementation in 1993 and are not discussed in this paper.

The Rural Health Research Program (RHRP) at the Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill contracted with the U.S. Bureau

of Health Professions, Division of Medicine to conduct a review of the status of the Rural Health Medical Education Demonstration Project in 1993. The RHRP conducted telephone interviews and made site visits to programs which were designated and operational or were previously designated under the program. The RHRP also contacted and gathered comparable information from other programs not involved in the Demonstration but with similar goals and procedures. The latter group was surveyed through telephone calls and secondary descriptions. The purpose of this data collection effort was not to formally evaluate the success of the Demonstration Program but to clarify the status of the Demonstration, identify barriers to the implementation of the project, develop suggestions to improve the project, and make recommendations concerning the continuation of the project.

The site visits and telephone inquiries provided a sense of the degree to which each program succeeded or failed in its implementation and its potential for improving the distribution of physicians in rural areas. The site visits included meetings with the program or project directors, key faculty in the residency program, administrators of the community hospitals, preceptors in the rural communities, current and former residents, and, in some instances, key community informants or other clinicians not formally connected with the program.

The evaluation included a series of information-gathering activities that focus on four categories of programs:

Category	Definition
1	Programs that have been approved and are active
2	Programs that were approved but withdrew after approval
3	Programs that have been selected but have yet to place residents as of June 30, 1993
4	Comparison hospital-based residency programs that have successful rural rotations or extended rural training experiences

Category Listing

Category 1
Providence Hospital, Southfield, MI
Oregon Health Sciences University, Portland, OR
Category 2
Pitt County Memorial Hospital, Greenville, NC
Methodist Hospital, Indianapolis, IN
St. Joseph's Hospital, Phoenix, AZ
University of North Dakota, Grand Forks, ND
Category 3
University of Cincinnati—Georgetown Hospital, OH
University of Arkansas for Medical Sciences, Little Rock, AR
University of Washington Medical Center, Seattle, WA
Sioux Falls Family Practice Residency, SD
Category 4
East Tennessee State University School of Medicine
University of New Mexico School of Medicine
Mary Imogene Bassett Hospital Cooperstown, NY
Duluth Family Practice Residency Programs affiliated with the University of Minnesota
Southern Illinois University School of Medicine
North Carolina AHEC Program
Texas Tech University School of Medicine

The analysis of the data and impressions gathered under this contract resulted in a series of conclusions and recommendations which can be divided into three categories:

1. Complaints about the program;
2. Necessary conditions for the program to be implemented;
3. Benefits and outcomes from the program.

The summary is thus organized under these rubrics and we use this structure to organize our remarks and cross-program comparisons.

Complaints

There were clearly some problems on the part of potential participants with the perception of the program and how it works. Since it is a reimbursement agreement program, participants often begin with the notion that this is a grant and will bring them new money that is not tied to patient care and that this money will go directly to either the sponsoring hospital's residency program or to the participating rural hospital rather than as a linked form of reimbursement to the sponsoring hospital. This misperception has caused problems in more than one program and is actually shared by some participants in all programs. Where there is a lack of real understanding of the funding structure among program principals it was easy to uncover complaints that "we were misled" about the nature of the program and this resulted in institutions failing to implement or reviewing their participation and deciding to leave.

For those who do stay with the program or fully understand the structure they do say that "it doesn't pay" in terms of support for the activities generated by the linkages. The programs do not have a way of allocating "overhead" to the additional activities required to administer the Demonstration and the institution's accounting structures allocate the Medicare indirect payments in such a manner that participants can't get the feeling that they are being recognized in any way for the effort.

The program does indeed produce additional support requirements and forces some of the sponsoring units, usually those that operate the residency, to use accounting processes that are outside the normal system of tracking; these costs are usually absorbed by the residencies or supported by AHEC funds. Successful and unsuccessful program participants see a need for additional start-up or support funds given directly to the residency unit that supports the projects.

The rural hospitals see no direct fiscal benefit and this has engendered a perception that the program "is unfair" because it leaves the rural hospitals without any tangible support beyond the presence of the resident. This perception occurs across successful and unsuccessful programs.

Recommendations:

The Project will quickly reach its potential under its current structure without some flexibility in the funding. The number of hospitals and residency programs willing to participate and continue to participate will be limited due to the lack of direct incentives. The program will require some small but flexible funding mechanism to support the liaison and administrative functions of the program. The AHEC programs in some states are sensitive to the presence of the project but are not consistent in their support for the project. An alternative

recommendation would be to require targeted AHEC support with control over its allocation in the hands of the sponsoring hospitals. The issue of AHEC relationships and the cross-funding of such activities are relatively controversial in the programs we queried. There is no clear mandate for the AHECs to fund this kind of activity and the requirement for AHEC participation in this program is not seen as strong enough to also require direct funding from the AHEC of these rural residencies. However, the obvious source of funds for a support mechanism for the Demonstration is the AHEC Programs in the states in which they are operating as the AHEC mission is directly related to the goals of this Demonstration. There also needs to be some, at least token, direct support for the rural hospitals for the purposes of cementing the relationships.

Necessary Conditions

In order for the RHMEDP to be implemented successfully there are a number of necessary conditions. These may seem obvious but the failure of some projects is due to a lack of careful consideration of these key elements. They include:

1. Enough residents to staff the project;
2. Effective preceptors in place to keep the project on track;
3. Competent business office that understands the reimbursement system;
4. Competent leadership that clearly understands the financing and the balance of responsibilities between sponsor and rural hospital.

While it may seem that having an adequate number of residents would be a clear precondition for application for the program and for selection, this has been an issue with more than one project. The sponsoring program may not have done well in a match for residents or the rotation schedule may have required more than the available number of residents to staff the rural hospital in such a way as to make that work effective and acceptable for the rural hospital.

The presence of an effective preceptor or preceptors is essential and it is the quality of the preceptors that assures success as much as the organization of the sponsoring program's curriculum and liaison. However, there is limited control over the preceptors from the point of view of the sponsoring residency program and preceptors have, in this program, left abruptly or not been able to complete their commitment to a project.

Having a competent business office is the condition that avoids the financial problems discussed above. The business office must be able to understand the realities of the Medicare indirect system of payment and be able to explain it to hospital leadership, the residency

program, and the participating hospital in a clear and direct fashion to avoid misunderstandings.

The communication ability of those persons occupying the key positions in the demonstration relationship is equally important. These individuals must be flexible and able to understand the "externalities" that come as benefits of the program as opposed to the fiscal benefits and actual costs.

Recommendations:

Applications for the program should include clear statements of the anticipated numbers of residents who will participate and be available to participate, and balance that with the number required to make the rotation viable within the curriculum and for the rural hospital. The commitment of the preceptor(s) should be strong and should acknowledge the fact that there is little or no direct support. The participating hospitals or medical schools should clearly state their understanding of the fiscal arrangements (preferably in a form agreement provided by BHPr).

Positive Perceptions, Benefits and Outcomes

The program is not expensive and this is recognized by most participants as being a plus for the program. Rotation arrangements can be set up without intensive financial investments, almost informally in fact.

Residents' experiences with the project were very positive and serve as its best advertising within the institutions as new residents move in or are recruited. In the two most successful programs the residents are allowed to practice with some degree of independence and this independence seems to be a missing component of the residency up to the point of the rural rotation.

Faculty see the rural residency rotation as "rounding" the resident's experience. The faculty have come to recognize the extremely important role of the independent aspects of the practice rotation in rural areas and see substantial changes on the part of residents including new enthusiasm for their training and a building of confidence. There is not a specific, noticeable shift toward rural practice inclination, in general, for those residents who did not have that type of practice in mind or who were undecided at the start of their residency. Effects on practice location choice seem to be secondary to the development of a more mature practice "style" on the part of residents or a settling of their perceptions of how they want to practice rather than where they want to practice.

The Demonstration seems to be a net gain to the rural sites in terms of service to the community, but there is a strong perception that it is the future return that will make the

greatest impact. The actual measurable benefit in terms of recruitment and retention cannot yet be measured. Where there has been direct retention of residents it has come as a result of prior work rather than as a direct result of the Rural Health Medical Education Demonstration program.

Recommendations

The program can serve as a way to strengthen rural residency experiences but may not be sufficient on its own to have extensive impact. The very positive effects it has on the residents with regard to their confidence and their independence should be the primary or co-equal selling point of the program for new projects which might consider participating as much as the goal of improving physician distribution. The program is not as comprehensive as comparison programs and projects that have arisen at other institutions but does have the potential to contribute substantially to a national goal of providing a majority of primary care residents with a rural rotation or meaningful experience in a rural site.

Summary Remarks

If the program is viewed as one which is designed to provide rural experiences, it is very successful but needs to be evaluated carefully in the context of other, similar programs. A standardized measure of rural "exposure" would help address the question, "What training experiences most effectively encourage residents to practice in rural places?"

If the goal of the program is placement, then the program definitely needs to encourage the opening of relationships with more sites. The net gain of productivity and the potential for broader retention would then exist. With the limited number of rural sites, there is concomitant limited opportunity for the residents to "settle" in the rural place where they are training. They will soon be full. The programs should identify additional sites and preceptors and spend time developing preceptor skills and additional relationships.

The program is still thought of as a demonstration rather than as one component of a program of projects to strengthen health care in rural areas by training resident physicians in rural hospitals. There are no formal plans for expansion, according to statements by the Bureau of Health Professions; the program intends to approve qualified applicants to remain at the authorized quota of 10 (Division of Medicine, 1993).

In 1994, there were 10 active projects as required by law. According to statements by the Bureau of Health Professions, the 10 projects satisfy the legislative intent. Therefore, there are no plans for additional solicitations for Rural Health Medical Education Demonstrations Projects.

Rural Health Medical Education Demonstration Project: Data Collection

After initial contacts with the programs, the directors were asked general questions concerning the operation of the projects, the numbers of residents involved and the relationship with their rural hospital.

Based upon these preliminary data-gathering activities, we developed a site visit and telephone protocol to assist the evaluation staff in gathering pertinent information to allow us to meet the Task Order requirements.

COMPLETED SITE VISITS:

1. University of Cincinnati-Georgetown Hospital, Ohio. New program, first resident to begin October 1, 1993. Site visit completed August 17, 1993.
2. Providence Hospital, Southfield, Michigan. This is a continuing program. Site visit completed August 19 and 20, 1993.
3. Oregon Health Sciences University — Enterprise, Oregon, a continuing program with excellent results. Site visit completed for August 9-10, 1993.
4. Methodist Hospital, Indianapolis, Indiana. This program withdrew from the grant. Site visit completed on August 18, 1993.

The remaining six programs were evaluated utilizing telephone interviews. Submission of the final report on this evaluation is due October 15, 1993. Total number of interviews for the entire project was forty-eight.

Oregon Health Sciences University, Enterprise, Oregon.

Category 1

This program is operated by the Department of Family Practice at the Oregon Health Sciences University. The Department is part of a comprehensive medical school campus overlooking Portland, Oregon. The setting is metropolitan in nature but has a suburban feel since it is located in the hills to the east of the center of Portland. The Medical School complex includes a large Veterans Administration Hospital, several smaller specialty and general hospitals, outpatient clinics and other professional schools. The Program is administered in the Department and is headed by the Director of the Family Practice Residency, John Saultz. Dr. Saultz is a well-trained family physician with experience in the military and is a graduate of the University of North Carolina family practice faculty development fellowship. He has been with the OHSU Department since 1986, is active in national family medicine programs and activities, and is the principal investigator for a Title VII grant to the

department and a HETC grant to the OHSU to train medical students and residents in Migrant Health Centers.

The rural hospital partner for the residency is the Wallowa Memorial Hospital in Enterprise, Oregon, which is located 300 miles to the east of Portland in a mountainous ranching and vacation area. The remote location of the rural hospital makes this program somewhat unique along with its being part of a University residency program located in a metropolitan city.

Interviews were held with Dr. Saultz, MD, Director of the residency program and Principal Investigator for the project; Patricia Eiff, MD, Associate Director of the residency program; Glenn Rodriguez, MD, who handles external affairs for the residency program; Francine Harmon from the University Hospital finance office; and residents Nick Gideonse, MD, and John Sager, MD, third-year residents in the program who went to Wallowa.

ADMINISTRATORS/RESIDENCY DIRECTORS

1. **Would expansion of the program to include more than one rural hospital and the use of ambulatory settings enhance the value of the program?**

The program has expansion plans in mind—they feel that they are limited only by the space they have in which to operate. The family medicine continuity clinic is an older converted residence at the rear of the main hospital. The program plans to expand into two newer sites and this would allow them to increase the number of residents to 12-15 per year easily; they have the quality applicants and could fill 30 slots if they were available. They had 263 applicants: 240 were U.S. senior medical students and the rest were IMGs. The bulk of applicants comes from Oregon but there are years when large numbers come from individual states. In the past year, the largest group was from West Virginia; two years prior Massachusetts had the greatest number.

Patricia Eiff was clear in stating that there ought to be more than one hospital community for this program and that the OHSU FM department was prepared to send students to more places.

The program actually rotates residents through three rural sites, John Day and Hermiston, with John Day being much like Enterprise, and Hermiston located closer to Portland and available for residents who don't feel as if they can leave their family for long periods or transport them out to the eastern parts of the state.

There is an AHEC residency program being developed in Klamath Falls, another rural location in southeast Washington, and that is being coordinated with the OHSU program through the

AHEC. A good deal of the writing of the proposal for the Rural Medical Education Demonstration grant was done in the AHEC by Sandy Ryman and the AHEC appears to assist in the identification of sites where residents may be able to practice and is scouting other hospitals for the training programs

2. Would the provision of start-up funds increase the attractiveness of this program to potential applicants?

It was clear that the participants who understood the program and its financing would like to see additional money to help pay for the expenses of travel to and from the remote site. This is a rather heavy burden since Enterprise is so far away. The AHEC system and other grants support the travel currently but there seemed to be evidence that this might not last forever.

The greatest need, said Eiff, " is administrative support. The complexity of this program is a problem, our administrator covers this without any funds," she continued. The costs of liaison for students at such a great distance was clearly a burden on the staff but was accepted because of the success of the program.

3. Have programmatic expenses been reimbursed in an agreeable, expedient manner by the respective financial intermediaries?

The rural hospital is a bit put off by the financing. "They don't seem to be written into the deal, dollar-wise" is the way Rodriguez put it; "I wish the small rural hospitals got something out of this" he said later referring as much to the clinical benefits as to the financial. Patricia Eiff stated that "there needs to be more sharing that goes into the rural communities" and there was a general perception that the program, although useful, was perhaps sending the money to the wrong entity. Eiff observed that "the challenge is to cost-shift to cover these things." The renewal of the Title VII grant will go to supporting the expansion into urban Portland and the AHEC support is not seen as permanent. "It would be hard to maintain this program without the other grants," said Eiff. "The dollar flow is a problem. The money from this is a problem. The hospital is getting money but we aren't, the hospital gets a pot of money" she continued.

4. How have programmatic expenses (the costs of organizing the program) been paid for?

It appears that programmatic expenses are covered by the Title VII funds for family medicine training and the AHEC contributes significantly. Ms. Francine Harmon spelled out the budgeting by explaining that the Medicare indirect was allocated to one PG-2 salary at $31.5K, 12 months of per diem at $250/month and four trips for each resident. The fiscal office calculates a percentage for every DRG the resident treats based on total Medicare income and the estimated resident treatment burden. The total budget figure is worked down from the claim-by-claim cost reporting. Ms. Harmon recognized that the Enterprise hospital "sees

nothing" in terms of money. She also indicated that there are no pass through or percent add-ons to fund the program. The reason the hospital supports the program is because it wants to be a "good citizen" since the hospital sees the program as "a wash." Ms. Harmon indicated that hospitals fund education programs "by hook or by crook." Who should be funding this? She replied that this was a good question for health care reform—"I think the funding has to be more direct."

In the negotiation with AHEC at the time the grant was written, the fiscal office advised AHEC what the grant would pay and how the fiscal office wanted to minimize what would be paid at a lower rate (presumably DRGs without any teaching indirect?). The hospital figured that they would be able to break even and went ahead.

5. **What are the obstacles (such as accreditation, institutional, etc.) that participating residency programs have had to overcome to institute rural residency rotations?**
In this case, there was only the skepticism over a deal that paid no direct funds and was perceived as perhaps happening anyway.

6. **Have residents been willing to select such residency rotations? What incentives have been necessary to induce residents to make such selections?**
Because of the early success of the residents who went to Enterprise, there has been no trouble getting residents to select for the rotation (or rather, not elect to pass it up with an alternative). The OHSU program has had to work to identify other places and seems careful in its selection process to want to identify excellent preceptors.

7. **What benefits do you see in this relationship?**
Saultz sees the rotation as very useful for the residents but mostly because of the quality of the experience in medicine, not necessarily as a "rural" experience. The residents themselves saw that they were in a situation that required them to be self-supporting and independent and they were able to mature in the process. The faculty recognized this as well and felt that the people who came back from Enterprise generally had changed with regard to maturity and confidence. Several examples were cited of dramatic changes in individuals' outlooks after the rotation. Saultz emphasized that the residency program at OHSU was not just a rural-oriented program, it had a number of opportunities for training in both urban, suburban, and rural places and was, therefore, attractive to a wide variety of potential residents.

8. **Did those hospitals that instituted rural rotations under the auspices of this program see this program as only a minor facilitator to an effort that would have been initiated anyway?**

The relationship was underway prior to the award. The relationship with Dr. Euhus was in place and he had developed relationships that would have placed residents in the hospital without this arrangement. The relationship with John Day without this support is evidence of this.

9. **What are the obstacles you had to overcome to institute this rural residency rotation?** None mentioned except the problems related to the money distribution. The distance sometimes causes "challenges" to individuals. The maintenance of the relationship with Enterprise requires constant attention and this may cause it to be considered expendable at some time in the future if there is a crunch.

Were they what you expected? If not, how were they different?

No mention of particular difficulties other than those already discussed.

10. **What is the attitude of residents to this program?**

Have they been willing to select this program?

The residents have been willing and enthusiastic participants as have the faculty.

Have you had problems with recruiting to the program?

There have been no problems in recruiting. The word has come around from the second-year people to the first-year residents that this is a pleasurable and challenging rotation. There also appears to be little seasonal problem.

Are there adequate residents available for the program?

The program has adequate numbers of residents and may actually be seeking additional sites if it expands.

11. **What relationship existed between the residency program and the rural hospital before this program was instituted? Probe for contacts and communications, changes in people. Look for "Great Man" influence or organizational linkages.**

The physician in the rural hospital has an existing relationship with the residency program and residents had been going out to the hospital prior to the formal implementation of the funding mechanism. The current program seems to have institutionalized the existing relationships which were developed through personal contacts and the AHEC system. Dr. Euhus is an independent practitioner with extensive skills and the residents are happy to be given great leeway in their practice and they are exposed to a wide range of problems and procedures that they would not otherwise be directly involved with.

12. What changes in the relationship has this program brought about?

The hospital has been in a state of flux with a new administrator, Brad Higgins, coming on board this year. The relationship is with Dr. Euhus and the hospital is really in a secondary position.

QUESTIONS FOR RESIDENTS

1. Why did you choose this rotation?

There wasn't a real choice since the rural rotation is essentially mandatory. The residents interviewed were those who did go to Enterprise as opposed to opting for other places. One resident wanted to go out to Enterprise during hunting season.

2. Tell me what you experienced in this rotation.

The experiences of the interviewed residents focused on their clinical experiences. They felt, through the people they saw in their activities of daily life, that they got a feel for the community but that there was no formal introduction or review of the community structure. All of the residents are oriented to the community in a brief introduction but they are then expected to function in their clinical role and gather local information as they go along. There is a degree of continuity of knowledge as the residents interact before and after their rotation to Enterprise and the continuity is strengthened by the visits of the faculty, but these are only occasional, 4-6 times a year.

3. Have rotations provided appropriate and sufficient exposure to diseases and medical conditions common to rural areas?

The residents were impressed with the range of problems they saw, especially orthopedics and surgery and the higher volume of geriatrics patients. They feel that since they see trauma more often they have a good handle on rural problems and they know that rural places tend to have more elderly in the population. They were aware of the need to make do in times of emergency trauma and the need to make referral and triage decisions quickly and to assess the capacity of referral centers prior to sending patients off. This is a "rural" aspect of medicine that they now recognize.

4. Did you see clinical conditions different from what you saw in your base residency?

One resident said: "this was the first time I put it all together, this was real family practice." The fact that the wide range of problems comes in simultaneously makes the experience most useful to the residents. The residents also learned that "they handled things more inefficiently in the (teaching) hospital and this is probably more important out there where things are tight."

If yes, how comfortable are you in handling these in the site?

There was no indication of discomfort.

5. **Have residents been exposed to the health delivery system and those responsible for its administration (especially other physicians) in the catchment area of the rural hospital?**

They were aware of referral problems and the needs and practice patterns of the other two physicians in the area. There was informal introduction to the system in the town and it appeared that the residents felt they were well enough acquainted with the community to function. The net result was that they did get a good introduction to the area although they were not asked to do a formal assessment of the health system.

Probe for contacts with health department, interaction with hospital board, specific names of hospital and local physicians.

The system in Enterprise revolves around the single clinic and hospital and all residents, by the nature of the place, learn all there is to know about the health care system in the small town.

6. **Do you feel that you are accepted by the local medical community?**

The residents did not feel any hospitality and their stay was too short to develop any deep connections. They felt accepted.

7. **Have residents been introduced to local community leaders and organizations?**

They were not formally introduced to organizations; they were fairly busy and were oriented to their responsibilities.

8. **Do residents finish their rotation with a favorable disposition towards practicing in a rural community?**

The results speak for themselves. Most of the residents felt their rotation in Enterprise was very useful and, according to some informants, this changed the life of at least one person and firmly solidified the career decisions of others. The degree of independence and the isolation that requires self-reliance were the strongest impacts of the experience. The 'rural-ness' of the site doesn't necessarily sell the residents on rural practice but it makes them aware of what they might encounter in an isolated practice.

9. What were your expectations of practice in this rural hospital? What have you learned about the rural community in which the site is located that strikes you as most different from an urban environment?

The residents expected less independence, less work and a bit more of the same from their earlier rotations. They got excited by the demands on them and the chance to practice fairly independent medicine.

10. Do you feel that this community is similar to other rural communities?

The persons questioned were fairly familiar with the variety of rural possibilities and felt that Enterprise was somewhat of an outlier. It was a recreation and vacation area with its own attractiveness and may not reflect the less desirable places in rural America that might be more dependent on agriculture or mining.

11. Do you feel you have a good idea of the local social, economic and demographic aspects of the community?

The residents felt they knew the community fairly well but did not have a systematic way to describe it.

How would you describe it?

One interviewee described it as a "family practice town." That observation was very important to the residents and to the faculty because they were consciously trying to develop self-reliance and identity in the residents.

The University of Cincinnati, Cincinnati, Ohio.

Category 3

This program is operated by the Department of Family Medicine at the University of Cincinnati College of Medicine. The Department is part of a comprehensive medical school campus located in a historical section of Cincinnati. The medical complex features a large Veterans hospital, a Shriners' burns hospital, a renowned children's hospital, several specialty and general hospitals, outpatient clinics, and professional schools. The program is administered in the Department by the chairman, Dr. Allen David. Dr. David is a board-certified family physician. He has been with the Department since 1991. He is a past president of the Society of Teachers of Family Medicine.

The rural hospital partner for this site is Brown County Hospital, Georgetown, Ohio, located 80 miles east of Cincinnati along the Ohio River. This is a 53-bed hospital with an average occupancy rate of 47.2 percent in 1992 and which serves a large rural county.

Interviews were conducted with Dr. David; Betty Gotthelf, Project Coordinator for the Rural Medicine Residency Rotation; Dr. Jeff Heck, Residency Director; Dr. Blair Chick, Family Practice Network Medical Director; Dr. Jeff Donohoo; Valerie Owen, Director, Community Health Service; Diana Fischer, CEO, Brown County Hospital; Dr. Filak, Associate Dean for Medical Education; John Begala.

ADMINISTRATORS/RESIDENCY DIRECTORS

1. **Would expansion of the program to include more than one rural hospital and the use of ambulatory settings enhance the value of the program?**

This program will be sending its first resident to Georgetown in October, 1993. Currently, only Brown County Hospital is planned for implementation; further expansion was considered educationally attractive, however no plans of adding other rural hospitals are in the works. Their rotation does utilize an ambulatory clinic: the Georgetown Family Health Center operated by the Southern Ohio Health Services Network, which will serve as the outpatient center for resident experience.

2. **Would the provision of start-up funds increase the attractiveness of this program to potential applicants?**

Start-up funds have been supplied by the Department of Family Medicine. The AHEC system will help to pay for the resident travel, however how long this will last is uncertain. Additional funds given directly to the Department could help pay for these expenses and remove that burden from the Department. Some reimbursement for administrative faculty time would also be attractive since this is a major expense during the start-up.

3. **Have programmatic expenses been reimbursed in an agreeable, expedient manner by the respective financial intermediaries?**

Since this program will send its first resident to Georgetown in October of 1993, no rotational expenses have been billed yet. The hospital has already made a financial agreement with the Department of Family Medicine and Georgetown Hospital. The hospital will be reimbursing both for their time and expenses. The University Hospital estimates that this grant will cost the hospital (after federal reimbursement) about 8-10,000 dollars/year. Dr. David commented that it is "the only grant they have that will cost the hospital money. Since a financial agreement has already been worked out, the rural hospital is not worried about potential costs. The University funded this program because of its being "good for the community."

4. **How have programmatic expenses (the costs of organizing the program) been paid for?**

As mentioned above, the Department of Family Medicine has paid for all start-up expenses so far. No resident expenses have been accumulated. The hospital has agreed to reimburse the Department and the rural hospital for their expenses. Dr. Heck stated that they received a HCFA waiver for the resident salary during this rotation so that the hospital can obtain the indirect medical educational reimbursement.

5. **What are the obstacles that participating residency programs have had to overcome to institute rural residency rotations?**

The primary problem that needed to be resolved involved finances. Fortunately, the University Hospital and Brown County Hospital worked out an agreement. This contract ensured that Brown County Hospital would not lose money on this grant. The University saw this grant as a worthwhile community project even though it would cost them a small amount of money annually. The only other problem elucidated involved difficulty in finding housing for the rotating residents.

Dr. David commenting further on funding Graduate Medical Education stated that "since GME funds all go to the hospital, residents are tied to the hospital. Graduate Medical Education funding needs to change, then a special incentive like this grant would not be needed."

6. **Have residents been willing to select such residency rotations? What incentives have been necessary to induce residents to make such selections?**

This is currently an elective rotation for second- or third-year residents in Family Medicine. So far, four residents have signed up to participate in the first year. The residents will be reimbursed for travel, room and phone calls. The educational curriculum is designed to meet the Residency Review Committee requirements for a gynecology rotation. The residents are then given the option of doing gynecology at the University Hospital or in Georgetown. By doing this, the rural rotation does not consume valuable resident elective time.

7. **What benefits do you see in this relationship?**

Drs. Heck and David thought that there were several potential benefits. First, they both felt that this could strengthen the Family Medicine third-year student rotation by identifying new preceptors. Second, new research opportunities could exist in Georgetown. And third, Dr. David stated that he "hoped to develop a rural residency track utilizing Brown County Hospital." This would be a "one plus two program," where residents would spend the first year at the University and the second and third years at the rural site. Dr. David believes the "state-of-the-art" in training rural physicians is the one plus two design.

However, he stated that it would take considerable time to develop such a program. He felt that "this grant will be the beginning of the process."

8. **Did those hospitals that instituted rural rotations under the auspices of this program see this program as a minor facilitator to an effort that would have been instituted anyway?**

The University of Cincinnati Department of Family Medicine desired to construct a rural resident rotation. About two decades ago they had such a rural rotation. Dr. Heck stated that "without the grant there would be no rotation. We would have been in planning stages for years." Dr. David agreed with this assessment and added that he was "pleased to see this develop sooner rather than later."

9. **What is the attitude of residents to this program? Are there adequate residents available for the program?**

Dr. David stated that he "would not anticipate any problems with manpower shortages for the next couple of years." However, he added that if they encountered several bad recruiting years in a row, resident shortages could become an issue. The program was pleased with four residents agreeing to rotate out to Georgetown.

10. **What relationship existed between the residency program and the rural hospital before this program was initiated?**

Brown County Hospital frequently refers patients to the University Hospital, however there was no considerable interaction between the two. The rural physicians are graduates of the University Family Medicine Program, and some of them teach in the third-year medical student rotation. The total relationship must have been comfortable because Brown County Hospital discovered the grant application, liked the concept, and approached the University with the idea.

11. **What changes in the relationship has this program brought about?**

Although the rotation will start soon there is considerable increase in dialogue between the Department, the rural physicians, and Brown County Hospital. All are excited about the commencement of this rotation.

QUESTIONS FOR RESIDENTS

No residents were interviewed because they have yet to send a resident to Georgetown for the rural rotation. However, what is designed for the residents is reported below.

1. **Tell me what you experienced during this rotation.**

Residents will start at Georgetown in October, 1993. Four residents have signed up for the rural rotation. Residents will spend the majority of their time with Drs. Chick and

Donohoo in the outpatient setting. Residents with also get inpatient experience at Brown County Hospital. In addition, activities are planned to introduce the training physicians to local community leaders and organizations.

2. Have residents been exposed to the health delivery system and those responsible for its administration (especially other physicians) in the catchment area of the rural hospital?

Resident physicians in Georgetown will get the opportunity to work with three administrators: Dr. Chick, Medical Director at the outpatient clinic; Steven Wilhide, MPH, administrator of the Southern Ohio Health Services Network; and Diana Fischer, CEO of Brown County Hospital.

Methodist Hospital, Indianapolis, Indiana.

Category 2

Methodist Hospital is an 1,100-bed referral center located in Indianapolis, Indiana. Residencies in all general and subspecialty areas are represented. The Department of Family Medicine sponsored the Rural Health Medical Education Grant. This well-respected Department contains eighteen residents and five full-time faculty members. Dr. Haley, the Department Chair, is a board-certified family physician. Although Dr. Haley serves as the Project Director for this grant, Dr. Linda Casebeer, as Project Coordinator, supplied the majority of the data for the evaluation. Dr. Casebeer's background involves Instructional System Technology; she has been with Methodist for eight years. Interviews were completed with Drs. Casebeer and Haley.

The rural affiliate, Crawfordsville Hospital, is located 60 miles west of Methodist and serves a rural population of approximately 15,000.

ADMINISTRATORS/RESIDENCY DIRECTORS

1. Would expansion of the program to include more than one rural hospital and the use of ambulatory settings enhance the value of the program?

Dr. Casebeer stated that she thought multiple hospitals would only be attractive if they had different educational experiences to offer rotating residents. She felt that ambulatory settings would expose the residents to valuable rural office medicine.

Methodist would have had considerable difficulty finding additional rural hospitals because of the grants definition of a rural hospital. Dr. Casebeer explained that they found "several hospitals that served rural areas and had associated board-certified family physicians to teach, only to find that the hospital size was greater than 100 beds." She specified that the definition of "rural hospital" should be loosened to not have any restriction regarding size.

2. **Would the provision of start-up funds increase the attractiveness of this program to potential applicants?**

Dr. Casebeer explained "this was the fall of our program." Methodist estimated their start-up costs at $180,000/3 years (faculty time, travel, room, etc.). At Methodist they serve approximately 40% Medicare patients, so their reimbursement at the end of the year would be 40% of their cost or $75,000/3 years. In addition, all of the funds would be credited to the hospital, not the Department of Family Medicine. Meanwhile, the Department would be accumulating expenses without any definite return. The rural hospital, Crawfordsville, refused to help the Department financially. Several other financial options proved fruitless. In the absence of start-up funds, Methodist withdrew from the grant.

3. **Have programmatic expenses been reimbursed in an agreeable, expedient manner by the respective financial intermediaries?**

Because of the above-mentioned financial complications, Methodist withdrew from the grant without any residents participating in the rural rotation. Methodist never billed any expenses under the auspices of this grant.

4. **How have programmatic expenses (the costs of organizing the program) been paid for?**

Same as question #2 and #3 above.

5. **What are the obstacles that participating residency programs have had to overcome to institute rural residency rotations?**

The primary problem encountered by Methodist involved securing Departmental funds to run the project. In addition, the rural hospital guidelines in the grant required three characteristics: 1) true rural setting, 2) board-certified family physicians, and 3) hospital of <100 beds. Dr. Casebeer stated that they "found this to be a difficult task." She felt relaxing requirement number three would "make it easier on the university hospitals without losing the effect of the grant."

6. **Have residents been willing to select such residency rotations? What incentives have been necessary to induce residents to make such selections?**

The incentives included room, board, and travel reimbursement. The elective rotation would have been open to family medicine, pediatric and internal medicine residents. According to Dr. Casebeer several residents expressed interest in the rotation.

7. **Did those hospitals that instituted rural rotations under the auspices of this program see this program as a minor facilitator to an effort that would have been instituted anyway?**

Methodist envisioned the grant as a major facilitator to an important cause. One goal of the Department of Family Medicine states a "commitment to educating residents about rural medicine." Dr. Casebeer felt that Methodist would return to the grant if the financial problems were corrected. The Department of Family Medicine still sponsors a rural rotation on a limited basis at another site.

8. What is the attitude of residents to this program? Are there adequate residents available for the program?

Although no obvious manpower problems existed, Dr. Haley stated that if a few years of poor enlistment occurred, reduced resident availability would result.

9. What relationship existed between the residency program and the rural hospital before this program was initiated?

No relationship between Methodist and Crawfordsville existed prior to the grant. Methodist desired to find a closer rural affiliate, however with the above-mentioned definition of "rural hospital," Crawfordsville became the closest option.

10. What changes in the relationship has this program brought about?

Dr. Casebeer stated that many people got excited about this developing project. As financial complications caused its demise, several disillusioned individuals resulted. Unfortunately, the relationship between Methodist and Crawfordsville was also negatively affected.

Providence Hospital, Southfield, Michigan.

Category 1

Providence Hospital is a 450-bed private institution administrated by the Sisters of Charity. The medical complex contains several large residencies. The grant is sponsored by the Department of Internal Medicine. The Director of the Department, Dr. Zaks, is double-boarded in internal medicine and cardiology. The coordinator, Mr. Tom Gentile, serves on the hospital's medical education committee.

The rural affiliate, Grayling Hospital, is located 220 miles north of Southfield in a popular vacation area. Grayling, a 75-bed hospital, serves two rural counties with a catchment population of 35,000. A large cohort of retired citizens lives in this area.

Interviews were conducted with Tom Gentile; Dr. Zaks; Dr. Pieper, member of the medical education committee; Paul Evers, Hospital Finances; Drs. Slater and Tordicoff, rural teaching physicians; and three resident physicians.

ADMINISTRATORS/RESIDENCY DIRECTORS

1. **Would expansion of the program to include more than one rural hospital and the use of ambulatory settings enhance the value of the program?**

The curriculum designed by Providence primarily utilizes an ambulatory setting. Residents, while participating in this elective, experience outpatient medicine in the office of Drs. Slater and Tordicoff. Additional hospitals could be attractive if there were a different experience to be gained there. However Providence has no activity at this time to expand to another hospital.

2. **Would the provision of start-up funds increase the attractiveness of this program to potential applicants?**

Providence Hospital paid for the resident housing, travel, salary, and faculty time. Start-up funds for all or part of these expenditures would be attractive. Although the Department of Internal Medicine lacks a separate budget from the main hospital, start-up funds would make for easier allocation.

3. **Have programmatic expenses been reimbursed in an agreeable, expedient manner by the respective financial intermediaries?**

No. ... Paul Evers stated that "we have been unable to get reimbursed." The grant cost the hospital $25,000 plus the resident's salary. Mr. Gentile continued "we were told that we would get a HCFA waiver for the resident's salary but we have been unable to obtain one." Providence has contacted the granting agency several times only to get "the run around."

4. **How have programmatic expenses (the costs of organizing the program) been paid for?**

As mentioned above, all expenses accrued so far have been paid by the hospital. Although Providence desires to at least break even on this project, they view this rotation as being valuable to the residents and the community.

5. **What are the obstacles that participating residency programs have had to overcome to institute rural residency rotations?**

Tom Gentile identified two obstacles in initiating this project: first, the uncertainty surrounding the financial reimbursement, and second, the definition of "rural" also presented a problem for Providence. They desired to utilize Cadillac Hospital, a modern 154-bed facility in a rural setting with board-certified family physicians available to teach. Unfortunately, the bed capacity of the hospital exceeded one hundred beds, making it unacceptable for the grant. Tom Gentile and Dr. Zaks both recommended relaxing the rural hospital bed requirement.

6. Have residents been willing to select such residency rotations? What incentives have been necessary to induce residents to make such selections?

In the first year of operation, three residents elected to participate in this rotation. Several residents are interested this year. Residents are reimbursed for room, board and travel.

7. What benefits do you see in this relationship?

Several possibilities exist in this relationship including faculty exchange programs, opportunities for CME, collaborative research, and an expanded referral base for Providence Hospital. Dr. Slater felt that the opportunity to teach "legitimized him as an expert," and that they were well-qualified to "deliver this primary care teaching."

8. Did those hospitals that instituted rural rotations under the auspices of this program see this program as a minor facilitator to an effort that would have been instituted anyway?

Dr. Zaks confirmed that the grant facilitated the development of this rotation, and "without the grant there would be no rotation." However, Dr. Zaks added that he has wanted this type of rotation because "there is a portion of training that is missing ... and this is the only way I have to expose residents to this experience."

9. What are the obstacles you had to overcome to institute this rural residency rotation?

The two major problems are mentioned above in question #5. Providence also experienced a shortage of available rural teachers. After receiving the grant, all of the rural board-certified family physicians associated with the program moved away. It took Providence nearly one year to reestablish new teachers. The migration was for unrelated purposes.

10. What is the attitude of residents to this program? Are there adequate residents available for the program?

The availability of residents for this rotation caused no strain to the remainder of the Department. No future problems were anticipated. Resident attitudes about the rotation are positive. The first resident to complete the rotation enjoyed the experience so much that he's repeating it again this year as a fourth year. This type of enthusiasm always generates interest.

11. What relationship existed between the residency program and the rural hospital before this program was initiated?

Basically no relationship existed prior to this program. This is the residency's first experience working with Grayling Hospital.

12. **What changes in the relationship has this program brought about?**

This relationship is just beginning to develop; Dr. Slater called for "increased communication lines between the two hospitals." He also desired frequent curricular meetings for this rotation so that expectations would be known and achieved.

QUESTIONS FOR RESIDENTS

1. **Why did you choose this rotation?**

"To experience real general internal medicine," explained Dr. Millard. He encountered rural practice as a medical student and enjoyed the opportunity. Now as a resident he wanted to reaffirm his delight in rural practice. Dr. Millard opted to repeat the rotation again this fall. All three residents expressed a desire to treat patients without subspecialty interference.

2. **Tell me what you experienced during this rotation.**

They experienced primary outpatient medicine in the office. Additional responsibilities included one week of inpatient care, and some community activities. Through the patients, residents felt that they got a feel for the community. Home visits with a community nurse allowed residents to see patients during their activities of daily life. One resident stated that he got the chance to "see the impact of disease on the lives of these people."

3. **Did this rotation provide adequate and appropriate exposure to diseases and medical conditions common to rural areas?**

A considerable geriatric population lives in this county. Because of this, most patients had complex medical histories. The residents were impressed with the wide range of general internal medicine they encountered. They appreciated the opportunity to take care of difficult medical problems without having to consult a specialist. They got the chance to "be a real generalist."

4. **Did you experience clinical conditions different from what you see in your base residency?**

These residents clearly received their first experiences in total patient care and prevention through this program. Residents also learned to be more efficient in the office. They realized that "although the pathology was similar to what they normally see, the approach was totally different."

***If yes,* how comfortable are you in handling these medical conditions?**

No discomfort was expressed.

5. Have residents been exposed to the health delivery system and those responsible for its administration (especially other physicians) in the catchment area of the rural hospital?

A formal assessment of the health delivery system was not completed, although residents did learn about referral patterns and community resources during parts of the rotation.

6. Did you feel accepted by the local medical community?

The local medical community enjoyed the resident exposure. They felt accepted for their four-week rotation.

7. Have the residents been introduced to local community leaders and organizations?

No formal introductions to organizations occurred.

8. Do residents finish their rotation with a favorable disposition towards practicing in a rural community?

"This is where general internal medicine is practiced," expressed one resident. Another resident who just started a subspecialty fellowship stated "no matter what specialty you practice, you must be a good primary care physician." The high degree of independence and self-reliance demanded maturity from all of the residents. All three came away enjoying rural general practice. For one individual with a previous exposure, it solidified his desire to practice in a rural setting.

9. What were your expectations of practice in this rural hospital? What have you learned about the rural community in which the site is located that strikes you as most different from the urban environment?

The home visits with the community nurse and the degree of independence they experienced were the unique aspects of the rotation. They expected less independence and less expertise in the teaching physicians.

10. Do you feel that this community is similar to other rural communities?

Consensus felt that Grayling is a typical rural town for Michigan. However, with its vacation spots it was clearly not a poor area. This location may not be representative of other rural areas in America.

11. Do you have a good idea of the local social, economic and demographic aspects of the community?

The residents felt they had a good appreciation for the community; most of them described home visits when attempting to summarize their community experience.

Data were collected from the remaining six programs utilizing a telephone interview.

Sioux Falls Family Medicine Residency, Sioux Falls, South Dakota.

Category 3

The grant at this institution was sponsored by the Sioux Falls Family Medicine residency. Sioux Falls, the largest city in South Dakota, has a population of about 100,000, and is nestled in a beautiful area surrounded by many rivers and lakes.

The residency program is a large (eighteen residents), respected program that has a stated desire to place family physicians in rural areas of South Dakota. The director, Dr. Kemp, is a board-certified family physician.

This rotation was developed three years ago utilizing nine rural sites in South Dakota. The rotation was joined with this grant and will send out its first resident in the fall of 1993. Interviews were conducted with Dr. Kemp; Richard McClaflin, project director and full-time rural coordinator; Amy Meir, grant writer; and Drs. Hermann, Hook and Vernig, former residents in the Sioux Falls program.

ADMINISTRATORS/RESIDENCY DIRECTORS

1. **Would expansion of the program to include more than one rural hospital and the use of ambulatory settings enhance the value of the program?**

This residency developed this rotation three years prior to the offering of this grant. In their original design, nine rural sites were utilized for resident opportunities. Mr. McClaflin explained that "each site offers a different experience." Attempts are made to match resident interest to available sites. With multiple sites they "hoped to increase the relationships and improve communication with small towns and small town hospitals." Six of residency's nine rural sites qualified for participation in the grant. Available opportunities included working with migrant farm workers and an Indian reservation.

2. **Would the provision of start-up funds increase the attractiveness of this program to potential applicants?**

Sioux Falls secured private foundation money for start-up expenses including computers, faculty time, communications and travel. Their expenses totaled $150K over three years. General feeling was that without the foundation support the rotation would not exist.

3. **Have programmatic expenses been reimbursed in an agreeable, expedient manner by the respective financial intermediaries?**

Although residents have been participating in this rotation for three years, it was approved under the auspices of this grant to begin in July, 1993. The first resident to travel to one of the rural sites will be this fall. Thus, no billing has occurred to date.

4. **How have programmatic expenses (the costs of organizing the program) been paid for?**

As mentioned above, private support from the Bush Foundation paid for all of the organizing expenses.

5. **What are the obstacles that participating residency programs have had to overcome to institute rural residency rotations?**

Only a few small problems developed during the instituting of this rotation. First, funding for the resident salaries needed to be secured. The hospital ended up "taking it on the chin" explained Mr. McClaflin. Second, funds for direct costs such as resident housing and food needed to be covered. A small amount of state-appropriated finances was allotted to help this problem. Amy Meir stated that one of her difficult tasks was to convince hospital administrators about the importance of rural health.

6. **Have residents been willing to select such residency rotations? What incentives have been necessary to induce residents to make such selections?**

For the last three years the rotation was offered as an elective. Approximately three or four residents participated each year. Also, one or two residents from other family medicine programs from around the country came to do this rotation. Visiting resident salaries were paid for by their residency of origin. This academic year, under the auspices of this grant, the rotation will become required in either the second or third year of residency. The only incentive was a $500 stipend to cover expenses. This stipend "removed any disincentives" according to Mr. McClaflin.

7. **What benefits do you see in this relationship?**

This program clearly strengthened relationships during its three years of operation. The residency received multiple volunteer faculty from rural sites to precept and take part in didactic educational opportunities. One episode of faculty exchange has also occurred. Amy Meir described a bike tour that Dr. Kemp and the residents take each year. This tour takes them to each of the rural sites at least every three years.

Also Mr. McClaflin stated that this rotation made "the department think about rural medicine and reaffirm their commitment."

8. **Did those hospitals that instituted rural rotations under the auspices of this program see this program as a minor facilitator to an effort that would have been instituted anyway?**

As mentioned above, the rotation was already up and running for three years prior to joining this grant. This residency made this rotation without the grant. However, the newly acquired grant money can secure that it will continue into the future. Their private foundation money was for only three years to support the organization of the project.

9. **What is the attitude of residents to this program? Are there adequate residents available for the program?**

Almost all of the residents enjoyed the educational experience. The residency has a stated mission of improving rural health, and because of this it attracts residents interested in rural practice. The only problem was that several of the sites were far away from the University—this made travel difficult and forced some individuals to be separated from family for an extended time. No shortages of residents has occurred.

10. **What relationship existed between the residency program and the rural hospital before this program was initiated?**

As stated above, each of the nine sites has been associated with the residency for three years prior to the grant.

11. **What changes in the relationship has this program brought about?**

Only those changes explained above were identified.

QUESTIONS FOR RESIDENTS

1. **Why did you choose this rotation?**

Drs. Vernig and Hook both visited Rosebud, South Dakota. This is an Indian reservation about 220 miles from Sioux Falls. Both expressed the desire to experience rural practice and serve a needy population. Also, previous residents had spoken very highly about the educational experiences at Rosebud.

2. **Tell me what you experienced during this rotation?**

Resident experience varied depending on the site chosen, however all of them experienced ambulatory practice, emergency room and some public health exposure.

3. **Did this rotation provide adequate and appropriate exposure to diseases and medical conditions common to rural areas?**

The need for medical care is greatly underserved at these sites. Residents consistently stated that their exposure was adequate and appropriate to appreciate rural medicine.

4. **Did you experience clinical conditions different from what you see in your base residency?**

The residents experienced more severe disease than what they normally see. Severe tuberculosis and end-stage diseases are just a few examples. One resident stated that she realized that there were "people completely without access to care and they suffer because of this lack."

***If yes,* how comfortable are you in handling these medical conditions?**

All residents expressed no concern over handling these complex medical problems. All of these physicians now practice in small underserved towns.

5. **Have residents been exposed to the health delivery system and those responsible for its administration (especially other physicians) in the catchment area of the rural hospital?**

One resident was exposed to the VA health delivery system at one of the sites. Other residents expressed discouragement with regard to the Indian Health Service, stating that it has "too much red tape."

6. **Did you feel accepted by the local medical community?**

The residents were very well accepted and expressed no problems during their rotations.

7. **Have the residents been introduced to local community leaders and organizations?**

Participants were always introduced to the communities they served in. One resident met with the translator for the movie "Dances with Wolves" and was involved in some community events with a regarded anthropologist. Another resident met with tribal leaders, the city council and a medicine man.

8. **Do residents finish their rotation with a favorable disposition towards practicing in a rural community?**

"This was the best educational experience of my family medicine training," stated Dr. Hermann. All of the residents expressed joy and lifetime-like experiences when discussing their experience.

9. **What were your expectations of practice in this rural hospital? What have you learned about the rural community in which the site is located that strikes you as most different from the urban environment?**

The major striking feature of these rural sites, to the residents, was the extreme need for medical care in these areas. Most did not realize that such severe conditions existed in the United States.

10. **Do you feel that this community is similar to other rural communities?**

These sites were clearly more impoverished than a typical rural site. Indian reservations are unique populations with their own specific needs.

11. **Do you have a good idea of the local social, economic and demographic aspects of the community?**

The residents who stayed at Rosebud lived at the Indian reservation. They also participated in all of the social events that occurred.

St. Joseph's Hospital, Phoenix, Arizona.

Category 2

St. Joseph's is a large private hospital located in Phoenix, Arizona. The hospital contains several primary care residencies including family medicine, pediatrics and internal medicine. The director of the grant from this institution was Dr. Donald McHard. Dr. McHard, the Director of the Department of Family Medicine, is a board-certified family physician.

Unfortunately, because of a lack of resident interest, the grant was never initiated. Dr. McHard was the only representative interviewed.

ADMINISTRATORS/RESIDENCY DIRECTORS

1. **Would expansion of the program to include more than one rural hospital and the use of ambulatory settings enhance the value of the program?**

Dr. McHard felt that additional sites would add more flexibility and potential experiences to the rural rotation. More sites, however, would decrease the number of residents visiting each site. He liked the idea of ambulatory settings since "primary care is what they need to learn."

2. **Would the provision of start-up funds increase the attractiveness of this program to potential applicants?**

This would clearly make it easier for the majority of departments that apply for this type of grant. Out-of-pocket expenses could be difficult for some departments, especially if there was no financial agreement worked out between the hospital and the department. At St. Joseph's department money was used for the few expenses incurred.

3. **Have programmatic expenses been reimbursed in an agreeable, expedient manner by the respective financial intermediaries?**

Unfortunately, because of a lack of resident interest, no one participated in the rural rotation. Without any interest, no expenses were billed.

4. How have programmatic expenses (the costs of organizing the program) been paid for?

The costs of organizing the program were paid by the Department of Family Medicine and ultimately by the hospital. Since no residents participated, expenses were limited only to faculty time needed to organize the grant. The resident salary would have been paid by the hospital.

5. What are the obstacles that participating residency programs have had to overcome to institute rural residency rotations?

The major objective that they failed to overcome was to "promote the rotation in other departments." The rotation was designed as an elective experience open to all primary care residencies (family medicine, pediatrics and internal medicine). Dr. McHard stated that "without promotion of the rotation in the other two primary care residencies the resident interest never developed."

6. Have residents been willing to select such residency rotations? What incentives have been necessary to induce residents to make such selections?

The demise of the grant at St. Joseph's Hospital was directly related to a deficit of resident interest. Dr. McHard explained that "no resident interest in rural practice surfaced." The grant would have reimbursed residents for travel, food and board. No other incentives were mentioned.

7. What benefits do you see in this relationship?

Dr. McHard envisioned several possibilities including research projects, educational exchanges and rotational opportunities for students. At their institution, the rural physician involved in the project presented a few grand rounds at the hospital, but no other ventures occurred.

8. Did those hospitals that instituted rural rotations under the auspices of this program see this program as a minor facilitator to an effort that would have been instituted anyway?

Dr. McHard commented that "the grant was the stimulus for the rotation." Unfortunately he is now short on faculty time. He stated that "once I have some new faculty, I would like to try the rotation again." He felt that his new residents carried greater interest in rural medicine than his previous residents. He desired to someday reinstate the rotation with or without the grant.

9. **What is the attitude of residents to this program? Are there adequate residents available for the program?**

There were always adequate resident numbers, however no interest in rural medicine surfaced.

11. **What relationship existed between the residency program and the rural hospital before this program was initiated?**

No relationship existed between the parent hospital and the rural affiliate prior to the development of the grant.

12. **What changes in the relationship has this program brought about?**

Dr. McHard stated that no changes occurred secondary to the development of this grant.

The University of Arkansas for Medical Sciences, Little Rock, Arkansas.

Category 3

The sponsoring department for this grant at the University of Arkansas is Family Medicine. The Department is part of a large medical complex which contains residencies from all specialties. The director of the project is Dr. Jeff Goldsmith, who is also the Department Chair. The residency is approved for eight residents for each year (twenty-four total slots). The Department has eight full-time physician faculty.

The grant was designed with five different rural sites the resident could choose to visit. The grant was approved for July, 1993; it is unknown when their first resident will participate. Drs. Jeff Goldsmith and Laurie Fischer were interviewed from this site.

ADMINISTRATORS/RESIDENCY DIRECTORS

1. **Would expansion of the program to include more than one rural hospital and the use of ambulatory settings enhance the value of the program?**

The grant from the University of Arkansas was designed with five different rural sites. Each location offered a different educational opportunity for a visiting resident. Dr. Goldsmith stated that the ambulatory settings would "be great since this would expose residents to real life rural practice."

2. **Would the provision of start-up funds increase the attractiveness of this program to potential applicants?**

"Start-up funds are necessary." Dr. Goldsmith thought the funds should go to the sponsoring department and not the hospital.

3. Have programmatic expenses been reimbursed in an agreeable, expedient manner by the respective financial intermediaries?

No residents have participated yet.

4. How have programmatic expenses (the costs of organizing the program) been paid for?

Departmental money has covered the few expenses incurred so far. However, Dr. Goldsmith thought the grant did include start-up funds and he was very angry when he found out the opposite. He sounded frustrated when he stated that he did not know how he was going to get the finances to run the rotation this year. He hoped to secure more departmental money.

5. What are the obstacles that participating residency programs have had to overcome to institute rural residency rotations?

Dr. Goldsmith denied any obstacles except for the above-mentioned financial issues.

6. Have residents been willing to select such residency rotations? What incentives have been necessary to induce residents to make such selections?

Three residents have already stated that they wanted to participate in the rotation in this first year. Incentives for the residents included room and board and their spouse was allowed to visit the rural site and spend a weekend.

7. What benefits do you see in this relationship?

Dr. Goldsmith was hopeful about the development of many beneficial relationships including joint research, lectures and faculty exchange. He stated it was too early so far to tell what was feasible.

8. Did those hospitals that instituted rural rotations under the auspices of this program see this program as a minor facilitator to an effort that would have been instituted anyway?

The grant was "clearly a facilitator" for a rotation that they had wanted to design. He felt the idea of the rotation was a good one. According to Dr. Goldsmith it would "affect where and how residents practice and it would teach them cost-effective medicine." Without the grant there would be no rotation at this time.

9. What is the attitude of residents to this program? Are there adequate residents available for the program?

No manpower shortage exists in their residency. Early indications of resident interest are good. Three residents have already signed up in this first year.

10. **What relationship existed between the residency program and the rural hospital before this program was initiated?**

Some sites have served for medical student rotations, while others contain graduates from their Family Medicine program. However, no strong association between the hospitals and the University exists.

11. **What changes in the relationship has this program brought about?**

None yet, it is too early for measurable changes.

The University of North Dakota, Grand Forks, North Dakota.

Category 2

The grant is sponsored by the Department of Family Medicine. The Department is just a small part of a large medical complex which contains residencies from multiple specialties. Grand Forks has a population of approximately 60,000 and is separated from East Grand Forks by the Red River.

The individual responsible for the grant, Dr. Mann, is the Director of the Department of Family Medicine. He is also a board-certified family physician. The Family Medicine residency at Grand Forks is a University-administered, community-based program with five residents in each year level. Dr. Mann was the only individual interviewed at this site.

The rural affiliate, Cavalier Hospital, is located seventy miles north of Grand Forks in an area of rolling farmland. Cavalier has twenty-five beds for patient care and serves a population of 10,000 people. Just prior to initiation of this rotation, a physician established a practice at Cavalier Hospital. This action removed any medical shortage in the area. Because of this, the University of North Dakota decided not to send any residents to this site. So far, a new location for the rotation has not been investigated.

ADMINISTRATORS/RESIDENCY DIRECTORS

1. **Would expansion of the program to include more than one rural hospital and the use of ambulatory settings enhance the value of the program?**

Dr. Mann saw several advantages to multiple sites including increased variety, more openings for residents, and research opportunities. However, he stated that he felt comfortable with just one rural hospital.

2. Would the provision of start-up funds increase the attractiveness of this program to potential applicants?

He felt that start-up funds were mandatory. Departmental funds were limited for such a venture.

3. Have programmatic expenses been reimbursed in an agreeable, expedient manner by the respective financial intermediaries?

Although a rural site was chosen, no residents participated in the rotation because just prior to initiation, a physician located in this underserved area and removed any need for more practitioners. No expenses were incurred, so no costs were billed.

4. How have programmatic expenses (the costs of organizing the program) been paid for?

The Department of Family Medicine paid for the organizing costs of the grant. The only major expense was for faculty time.

5. What are the obstacles that participating residency programs have had to overcome to institute rural residency rotations?

Dr. Mann stated that the definition of 'rural hospital' could be relaxed to make it easier to find appropriate teaching sites. In particular, eliminating the small size requirement for the rural hospital would ease recruitment. The only other obstacle was in securing departmental funds for the organization of the grant.

6. Have residents been willing to select such residency rotations? What incentives have been necessary to induce residents to make such selections?

Although no formal poll was conducted, Dr. Mann felt that there was considerable resident interest in the rural rotation. The residents were not asked to commit to the rotation since it never got off of the ground. The only incentives that would have been offered to the residents would have been travel costs, room and board.

7. What benefits do you see in this relationship?

The primary benefit besides educational experiences was the opportunity to help rural communities by placing needed physicians in those areas.

8. Did those hospitals that instituted rural rotations under the auspices of this program see this program as a minor facilitator to an effort that would have been instituted anyway?

The grant was a facilitator for the rural rotation. Dr. Mann had wanted to develop such a rotation for a while. He hopes to find another rural affiliate and design another rotation for potential operation under the auspices of this grant. So far, however, locating a suitable rural hospital has been unsuccessful.

9. **What is the attitude of residents to this program? Are there adequate residents available for the program?**

Dr. Mann stated that there was no shortage of residents for this rotation. He did understand how shortages could develop after a few years of poor recruitment, especially in a small residency. Resident attitude was good according to Dr. Mann, although unfortunately no participation has occurred.

10. **What relationship existed between the residency program and the rural hospital before this program was initiated?**

No major relationship existed prior to the development of this grant.

11. **What changes in the relationship has this program brought about?**

Since the rotation has been canceled, the relationship has not prospered.

The University of Washington Medical Center, Seattle, Washington.

Category 3

The sponsoring Department from the University of Washington is Internal Medicine. The Department is a part of a large medical complex that includes residencies from primary care and all specialties. The grant was approved to start in July, 1993. One resident has already finished this rotation. This large Internal Medicine residency has a total of thirty-six residents.

The director of the program is Dr. Ronald Loge, an internist located in Dillon, Montana, one of two rural sites. The other rural site is in Livingston, Montana, which is approximately 800 miles from the University. Dr. Le Blonde is the board-certified internist teaching at that site. Residents are allowed to choose from either of these picturesque rural sites for their rotation. Both experiences were primarily ambulatory-based, with a small amount of inpatient care.

ADMINISTRATORS/RESIDENCY DIRECTORS

1. **Would expansion of the program to include more than one rural hospital and the use of ambulatory settings enhance the value of the program?**

Dr. Loge designed this rotation with two rural sites, Barrett Memorial Hospital in Dillon (600 miles away, 31 acute care beds with 16 long-term care beds; 949 admissions in 1992, 25.8% average occupancy) and Livingston Memorial Hospital in Livingston, Montana (800 miles away, 32 acute care beds, 1,076 admissions in 1992, 37.5% average occupancy). Also the

residents function primarily in ambulatory settings at both locations. Dr. Loge felt both of these sites would enhance resident learning and appreciation of rural practice.

2. Would the provision of start-up funds increase the attractiveness of this program to potential applicants?

Start-up funds would be attractive and probably necessary for some programs. Dr. Loge secured departmental and association funds to support his project.

3. Have programmatic expenses been reimbursed in an agreeable, expedient manner by the respective financial intermediaries?

Dr. Loge stated that they just submitted their first bill and that there had been no response to date.

4. How have programmatic expenses (the costs of organizing the program) been paid for?

Two sources of funds supplied the revenue to organize the project. First, the Department of Internal Medicine agreed to help develop this project. Second, the American College of Physicians, Montana Branch also helped finance the project. According to Dr. Loge he needed about $15K per year for travel, food and lodging. This figure did not include faculty time.

5. What are the obstacles that participating residency programs have had to overcome to institute rural residency rotations?

The main obstacle was finding funding for the food, travel and lodging. The above named sources of funds were all temporary. The grant "supplied needed money that without, I feel the rotation would have run dry." Dr. Loge also stated that the resident's salary was paid for by the Department.

6. Have residents been willing to select such residency rotations? What incentives have been necessary to induce residents to make such selections?

In large numbers, the residents have asked to do this elective rotation. So far, nineteen months of service at the two sites have been promised. The only incentive in the program is reimbursement for travel and housing. Even with the large travel distances required the residents have been excited about the opportunity.

7. What benefits do you see in this relationship?

Dr. Loge thought that it was to early for any benefits to be seen. Plus, the relationship between the centers would be difficult because of the extended distances.

8. **Did those hospitals that instituted rural rotations under the auspices of this program see this program as a minor facilitator to an effort that would have been instituted anyway?**

Dr. Loge explained that "the grant was a facilitator. We were already setting the rotation up. The grant helped keep it afloat."

9. **What is the attitude of residents to this program? Are there adequate residents available for the program?**

The Internal Medicine program at The University of Washington is very large and well respected. No shortage of residents is anticipated. As mentioned above, residents are excited about this opportunity, already nineteen months of service have been promised. Dr. Loge explained that it "has given residents a new appreciation for rural medicine."

10. **What relationship existed between the residency program and the rural hospital before this program was initiated?**

No major relationship existed prior to the grant.

11. **What changes in the relationship has this program brought about?**

None so far, but it is very early.

QUESTIONS FOR RESIDENTS

1. **Why did you choose this rotation?**

Dr. Dewitt, the one resident to travel to Dillon, stated that she wanted to experience primary care medicine outside of the University. She also has a definite interest in future rural private practice.

2. **Tell me what you experienced during this rotation.**

Dr. Dewitt did inpatient hospital care, outpatient ambulatory care and shared call with Dr. Loge at night. Her rotation also included lots of community and social events.

3. **Did this rotation provide adequate and appropriate exposure to diseases and medical conditions common to rural areas?**

Dr. Dewitt stated that she did lots of procedures, most of which she would not be able to do at the University. She saw disease as it first presents, rather than after several other physicians have viewed the patient. She enjoyed the preventive medicine aspect of the rotation and the opportunity to make primary care decisions that a specialist would normally decide.

4. **Did you experience clinical conditions different from what you see in your base residency?**

The approach to medical care was clearly different as mentioned above. The pathology seen was similar to what she was used to seeing.

5. **Have residents been exposed to the health delivery system and those responsible for its administration (especially other physicians) in the catchment area of the rural hospital?**

Dr. Dewitt explained that she did learn about private practice delivery. However, she did not engage herself in the health care delivery system of the larger area.

6. **Did you feel accepted by the local medical community?**

Dr. Dewitt described a rotation where she felt totally welcomed and appreciated.

7. **Have the residents been introduced to local community leaders and organizations?**

Dr. Dewitt met the district attorney, the minister and the principal of the schools.

8. **Do residents finish their rotation with a favorable disposition towards practicing in a rural community?**

"This was the best one-on-one faculty interaction during my residency," stated Dr. Dewitt. She stated that it is her mission to get as many residents interested in this rotation this year as possible. This year Dr. Dewitt will be traveling back to Dillon to help cover Dr. Loge's practice while he is on vacation. She stated that this rotation will "influence my role with specialists and how I practice general internal medicine wherever I am."

9. **Do you feel that this community is similar to other rural communities?**

Dr. Dewitt grew up in a small town and she felt that Dillon was representative of a rural city.

10. **Do you have a good idea of the local social, economic and demographic aspects of the community?**

Dr. Dewitt sang in the church choir, spoke at a local high school, got invited to a "branding," and several other social events in the community.

East Carolina University, Greenville, North Carolina.

Category 2

The sponsoring department for the grant at this institution was Family Medicine. The Department is part of a large medical complex at the Pitt County Memorial Hospital in

Greenville, North Carolina. The complex was constructed for the stated purpose of increasing the supply of physicians to the eastern rural section of North Carolina.

The rural affiliate, Williamston Hospital, has approximately 30 beds and is located northeast of Pitt County near the Roanoke River. The rotation lasted for one year at this site. Following a few years of poor resident recruitment in the Department of Family Medicine, a manpower shortage developed and the rotation was canceled.

To assess this site, interviews were conducted with Dr. Dean Patten, faculty member in Family Medicine; Buck Sitterson, hospital administrator; Drs. Clarke and Garither, resident physicians; and Wendy Dunbar, hospital billing.

ADMINISTRATORS/RESIDENCY DIRECTORS

1. **Would expansion of the program to include more than one rural hospital and the use of ambulatory settings enhance the value of the program?**

Dr. Patten felt that multiple sites would add to the complexity of operating this project. He stated that it "would be too many people to organize." He encouraged the model utilizing a single rural site.

2. **Would the provision of start-up funds increase the attractiveness of this program to potential applicants?**

Start-up funds are "very nice when available." His funds came from the Department of Family Medicine and were not very significant. He felt organizing money could be more important to other institutions.

3. **Have programmatic expenses been reimbursed in an agreeable, expedient manner by the respective financial intermediaries?**

Dr. Patten was "uncertain if they had gotten reimbursed." He did remember that there was confusion in hospital billing for this project. After discussions with the responsible individuals in the finance department, it was discovered that East Carolina did get reimbursed for their expenses. Hospital billing also confirmed that there was considerable confusion on the procedure for reimbursement.

4. **How have programmatic expenses (the costs of organizing the program) been paid for?**

All initial expenses were covered by the Department of Family Medicine. Dr. Patten stated that the needed funds were small, primarily paying for faculty time.

5. **What are the obstacles that participating residency programs have had to overcome to institute rural residency rotations?**

Dr. Patten explained that most of the effort went smoothly. The most difficult aspect of instituting this rotation was finding time in the resident's schedule. Arranging the teaching

was not difficult. The rural hospital was very interested and corroborated with the University.

6. Have residents been willing to select such residency rotations? What incentives have been necessary to induce residents to make such selections?

The rotation was a required one-month experience. Residents were not given the opportunity to make a different selection. Residents were reimbursed for travel, hotel and food. No other identified incentives existed for this rotation.

7. What benefits do you see in this relationship?

Dr. Patten stated that one very good relationship was established with two rural surgeons who continue to teach in the residency program even though the Williamston rotation lapsed. These two teachers taught aggressively and were well respected by the residents.

8. Did those hospitals that instituted rural rotations under the auspices of this program see this program as a minor facilitator to an effort that would have been instituted anyway?

The grant was the major incentive for the rotation. "Pitt County Hospital desired to participate in the grant. The Hospital sent the application to the Department of Family Medicine and it landed on my desk," explained Dr. Patten. He was instructed to compose the grant. Dr. Patten clearly did not feel that the grant was useful in training residents for rural practice. He stated "I feel this rotation is too little too late. A rural residency track does a lot more to stimulate rural practice." Although the decision would not be his responsibility, he did not feel that East Carolina would participate in this grant again even if their resident numbers returned to an adequate quantity.

9. What is the attitude of residents to this program? Are there adequate residents available for the program?

As explained above, a manpower shortage forced East Carolina to terminate this required rotation after one year. In regard to resident attitudes toward the rotation, Dr. Patten stated: "They thought there was good teaching at this rural site."

10. What relationship existed between the residency program and the rural hospital before this program was initiated?

Williamston sometimes served as a location for medical student rotations. East Carolina is also the closest referral hospital to Williamston. No other major relationship existed between these two hospitals.

11. **What changes in the relationship has this program brought about?**

As mentioned above, a healthy relationship still exists between the Department of Family Medicine and the two teaching rural surgeons. No new relationship between the hospitals developed.

QUESTIONS FOR RESIDENTS

1. **Why did you choose this rotation?**

This rotation was required during the second year of the three-year family medicine residency. Residents were not given any choice about participation. Both residents who discussed this rotation stated that they were looking forward to the opportunity to practice in a rural site. Both of these physicians now serve a rural area in eastern North Carolina.

2. **Tell me what you experienced during this rotation.**

The residents participated in a mixture of inpatient hospital medicine, office-based medical practice, and evening on-call responsibilities. The residents were instructed by a board-certified family physician. No community or social events were experienced by the participants.

3. **Did this rotation provide adequate and appropriate exposure to diseases and medical conditions common to rural areas?**

Both residents who were interviewed felt that there was a wide spread of pathology represented in Williamston.

4. **Did you experience clinical conditions different from what you see in your base residency?**

Although the pathology was similar to what they experience at the University, the emphasis on disease prevention and the increased continuity was new to both residents. Both participants enjoyed providing "true primary care." They felt that it was a challenge to practice without specialists nearby. Their decisions required more thought and planning.

***If yes,* how comfortable are you in handling these medical conditions?**

These residents now practice together in a rural area of North Carolina. Both expressed comfort in handling these types of conditions.

5. **Have residents been exposed to the health delivery systems and those responsible for its administration (especially other physicians) in the catchment area of the rural hospital?**

No major exposure to the health delivery system was expressed by either physician.

6. **Did you feel accepted by the local medical community?**

Other than their teaching mentor, the participants were not exposed to any other aspect of the medical community.

7. **Have the residents been introduced to local community leaders and organizations?**

Neither resident remembered meeting any community leaders or being involved in any organizations.

8. **Do residents finish their rotation with a favorable disposition towards practicing in a rural community?**

Dr. Clarke stated that he "felt great about the rotation" and that he "wanted to go back." Dr. Garither felt similarly. Both physicians wanted to practice in a small town prior to residency. This rotation strengthened their feelings. These two now practice together near Goldsboro, North Carolina.

10. **Do you feel that this community is similar to other rural communities?**

Both of these physicians grew up in small towns in North Carolina. They felt that Williamston represented rural practice appropriately.

11. **Do you have a good idea of the local social, economic and demographic aspects of the community?**

Neither resident learned anything about the local community except what they learned from the patients they treated.

Comparison Programs.

Category 4

The contract called for comparison of the Rural Health Medical Education Demonstration Program sites with other programs and projects that were similar in nature. The evaluation team reviewed materials and descriptions of over 50 potential programs described in "Academic Initiatives to Address Physician Supply in Rural Areas of the United States: A Compendium" published by the Association of American Medical Colleges, and the Bibliography under the same title which appeared in the supplement to the Volume 65 Number 12 issue of *Academic Medicine*. Additional potential projects were described in "Recruiting and Retaining Physicians/Specialists in Small Rural Hospitals: Literature Review and Quantitative Analysis" by Robert A. Conner, John Kralewski, and Steven Hillson of the University of Minnesota School of Public Health. The surprising result of this review was the lack of hospital-based rural site residency programs or residency rotations. Much of what was

described in the reviews were programs to encourage medical students to select primary care residencies or to have some form of experience in an underserved area. There were relatively few residency programs that focused their energies on rural practice and very few rural hospitals offering residency slots or rotations.

This conclusion is supported by data from the American Hospital Association. The 1989 American Hospital Association Guide includes information concerning the presence of some form of approved medical residency program in the hospital and a formal nurse training program. The AHA data set listed 2,665 general acute care hospitals in nonmetropolitan counties; 1,030 had fewer than 50 beds, 895 had 50-99 beds, 558 had 100-199 beds, and 182 had 200 or more beds. Of those nonmetropolitan hospitals, only 41 had an approved medical residency program. Twenty-five of those programs were in the largest hospitals with 200 or more beds; there were only five in the hospitals of fewer than 100 beds. A separate data set from the AHA listed 106 hospitals in nonmetropolitan counties with some form of medical school affiliation; 60% of these were in the largest nonmetropolitan counties.

The programs that did have directed rural residency rotations in most cases did so with some form of outside support and the income generated by residents was accounted for in the productivity they added to the rural site. These residency rotations were also generally focused on community-based outpatient clinics or physician offices and rarely involved some formal arrangement with a hospital.

East Tennessee State University School of Medicine

The East Tennessee State University James H. Quillen College of Medicine Department of Family Medicine requires a rural rotation of all its second-year residents. The focus is on community medicine and involves primarily outpatient settings.

University of New Mexico School of Medicine

This institution has developed a rural resident program that revolves around a community-oriented primary care curriculum. Residents are required to spend time in rural sites where they participate in a COPC system. The costs of rotation through rural hospitals affiliated with the program are borne by special grants from the State for rotation costs. The grant program also includes funds for the creation of new rural rotations and the development of new residencies.

Mary Imogene Bassett Hospital, Cooperstown, New York

The Rural Primary Care Internal Medicine Residency Program requires an extended rotation in one of several rural sites in the PGY2 and 3 years; the sites include a 28-bed hospital subsidiary

of the Bassett Hospital in Delhi, New York. The Bassett Hospital is itself located in a rural area but is the sponsor and center for the independent residency programs; other sites are community-based physician offices.

Duluth Family Practice Residency Programs affiliated with the University of Minnesota

The Rural Physician Associate Program (RPAP) is perhaps the most developed of the focused rural programs for medical students and residents. The Duluth program includes a residency arrangement with the University of Minnesota that rotates family practice residents through community practices in northern Minnesota.

Southern Illinois University School of Medicine

The Southern Illinois University School of Medicine maintains affiliations with five hospitals in southern Illinois. The costs of these rotations are covered by special legislation from the Illinois Legislature.

North Carolina Area Health Education Center (AHEC)

The Mountain Area Health Education Center (MAHEC) program centered in Asheville, NC trains family practice residents in several affiliated clinic sites in western North Carolina. The rotation of the residents through hospitals is for specific specialty requirements for family medicine and is restricted to the larger urban hospitals affiliated with the MAHEC.

Texas Tech University School of Medicine

The Texas Tech University School of Medicine cooperates with the Shallowater Family Practice Center for a two-year extended elective experience for second and third-year family practice residents. Residency rotations in hospitals in the Lower Valley of the Rio Grande in the El Paso area are supported by state funds appropriated by the legislature beginning in 1989.